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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,047	04/08/2004	Alex Hill	sensor	3046
23217	7590	10/31/2006	EXAMINER	
GLENN L. WEBB			EDWARDS JR, TIMOTHY	
P.O BOX 951			ART UNIT	
CONIFER, CO 80433			PAPER NUMBER	

2612

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,047

Applicant(s)

HILL, ALEX

Examiner

Timothy Edwards, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on amendment filed August 24, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 24, 2006 have been fully considered but they are not persuasive. Applicant's argument is based on claims as amended. Therefore, Examiner maintains Office Action dated May 16, 2006.

With regard to Applicant's argument of the USP 5,103,085 patented to Zimmerman the Examiner remains of the opinion this reference is pertinent to applicant's (amended) claim 7.

Applicant's Argument:

With respect to (amended) claim 7, REMARKS submitted May 16, 2006, page 8, third paragraph applicant argues, a) Zimmerman does not disclose an infrared transmitter for reflecting a signal onto a heat emitting object with an infrared receiver for receiving the reflected signal; b) Zimmerman in particular does not disclose a keypad assembly with an illumination device that is activated when the infrared transmitter reflects a signal onto a heat emitting object onto a infrared receive.

With respect to applicant's argument the examiner lack of motivation to combine the Ludenia reference with cited primary references.

Examiner's Response:

With regard to part (a) above Examiner directs applicant's attention to the abstract and column 6, lines 1-26 in which Zimmerman states the use of an infrared

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transmitter and receiver. Zimmerman also disclose the receiving reflected light off a finger in proximity of the switch. A finger is a heat-emitting object:

With regard to part (b) above Examiner directs applicant's attention to column 6, lines 27-31 and col 9, lines 45-55 in which Zimmerman states the use of LED's to indicate the status of the proximity switches. Examiner interprets this language, the indicated status of a switch, to mean whether the switch is activated or not and the switch is activated when its photodetector receives reflected light. Therefore, Examiner is of the opinion Zimmerman '085 remains pertinent to the amended claims.

In response to Applicant's argument that there is no suggestion to combine the references of Ludenia '652 and Zimmerman or Rekimoto, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken, as a whole would suggest to one of ordinary skill in the art. In re McLaughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA) 1969. In this case, all references used were in the same field of endeavor. All that is required to show obviousness is that the applicant "makes his claimed invention merely by applying knowledge clearly present in the prior art. Section 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor." In re Winslow, 53 CCPA 1574, 1578, 365 F.2d 1017, 1020, 151 USPQ 48, 50-51 (1966)

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,12 are rejected under 35 U.S.C. 102(e) as being anticipated by Arnon '318.

Considering (amended) claim 1, Arnon discloses a data input device comprising, a) at least one infrared transmitter for transmitting an infrared signal to a heat emitting object (see col 4, lines 29-32 and col 8, lines 31-38); b) at least one infrared receiver coupled at least one control circuit and the control circuit controlling at least one output in response to the reflected signal (see col 3, lines 5-20 and col 6, lines 57-67).

Considering (amended) claim 12, the limitations of this claim are interpreted and rejected as stated in claim 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-6,13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnon as applied to claim 1 above, and further in view of Ludenia '652.

Considering (amended) claims 2,13 Arnon discloses an infrared input system comprising an infrared transmitter, a receiver for receiving a reflected transmitted signal and the receiver communicating the reflected signal to a control circuit. However, Arnon does not specifically recite intermittently transmitting his signal. Ludenia teaches in paragraphs [0027-0029] intermittent infrared transmitter, a receiver for receiving a reflected transmitted signal and the receiver communicating the reflected signal to a control circuit. One of ordinary skill in the art would readily recognize the transmitting of the infrared signal intermittently would conserve power as taught by Ludenia in paragraph 0029. Therefore, it would have been obvious to one of ordinary skill in art to use the infrared transmission means of Arnon intermittently as taught by Ludenia because both systems are concern with the transmission of infrared detection signals and the receiving of the reflected signal to control an output of a control circuit. Also, Ludenia teaches transmitting intermittent signals conserves power, thus giving the transmitter longer life.

Considering (amended) claims 3,14 Arnon discloses the limitation of this claim (see col 8, lines 39-42).

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Considering (amended) claims 4,15 Arnon discloses the limitation of this claim (see col 6, lines 57-62).

Considering (amended) claims 5,16 Arnon does not specifically recite activating a timing device by the output of the control circuit. One of ordinary skill in the art would readily recognize the output of the control circuit of the Arnon system might activate any number of devices to include a timing device. Therefore, it would have been obvious to one of ordinary skill in the art to use the output of the control circuit of the Arnon system to activate a timing device because the output of the control circuit of the Arnon system might be used activate any number of devices.

Considering (amended) claims 6,17 Arnon discloses the limitation of this claim (see col 6, lines 57-67).

6. Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Zimmerman '085.

Considering (amended) claim 7, Zimmerman discloses a proximity detector and switch comprising, a) at least one control circuit controlling at least one output (see col 4, lines 32-36 and col 6, lines 41-47); b) at least one button on the keypad configuration including an LED for illuminating the surface of the button (see col 6, lines 27-31); c) at least one infrared receiver for receiving a reflected signal from the transmitter (see col 3,

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line 67 to col 4, line 6); d) infrared transmitter located adjacent to the control keypad for reflecting a signal onto a heat emitting object (see col 6, lines 1-11 and fig 1B, items 6 and 15); e) an infrared receiver receiving a reflected signal from the heat emitting object (see col 6, lines 5-11); f) an infrared receiving mechanism coupled to at least one control circuit (see col 5, lines 25-36); g) the illumination mechanism illuminating the button upon receiving a reflected signal from the transmitter (see col 6, lines 27-31 and col 9, lines 52-56).

1. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman as applied to claim 7 above, and further in view of Ludenia '652.

Considering claim 8, Zimmerman discloses an infrared input system comprising an infrared transmitter, a receiver for receiving a reflected transmitted signal and the receiver communicating the reflected signal to a control circuit. Zimmerman does not specifically recite intermittently transmitting his signal. Ludenia teaches in paragraphs [0027-0029] intermittent infrared transmitter, a receiver for receiving a reflected transmitted signal and the receiver communicating the reflected signal to a control circuit. Obviousness is as stated in claim 2.

Considering claim 9, Zimmerman discloses the limitation of this claim (see col 2, line 67 to col 3, line 2).

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Considering claim 10, Zimmerman does not specifically recite activating a timing device by the output of the control circuit. One of ordinary skill in the art would readily recognize the output of the control circuit of the Zimmerman system might activate any number of devices to include a timing device. Therefore, it would have been obvious to one of ordinary skill in the art to use the output of the control circuit of the Zimmerman system to activate a timing device because the output of the control circuit of the Zimmerman system might be used activate any number of devices.

Considering claim 11, Zimmerman discloses the limitation of this claim (see col 5, lines 1-17).

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Potkonen '239, Rafii et al '422 and Brinjes '633 disclose using a motion sensor for detecting motion and providing a control signal

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Examiner Timothy Edwards, Jr. at telephone number (571) 272-3067. The examiner can normally be reached on Monday-Thursday, 8:00 a.m.-6:00 p.m. The examiner cannot be reached on Fridays.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (571) 272-7308.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-4700, Mon-Fri., 8:30 a.m.-5:00 p.m.

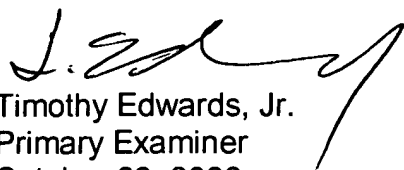
Any response to this action should be fax to:

(571) 273-8300 (for formal communications intended for entry).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov> or contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "T. Edwards, Jr.", with a long, sweeping horizontal stroke extending to the right.

Timothy Edwards, Jr.
Primary Examiner
October 29, 2006